

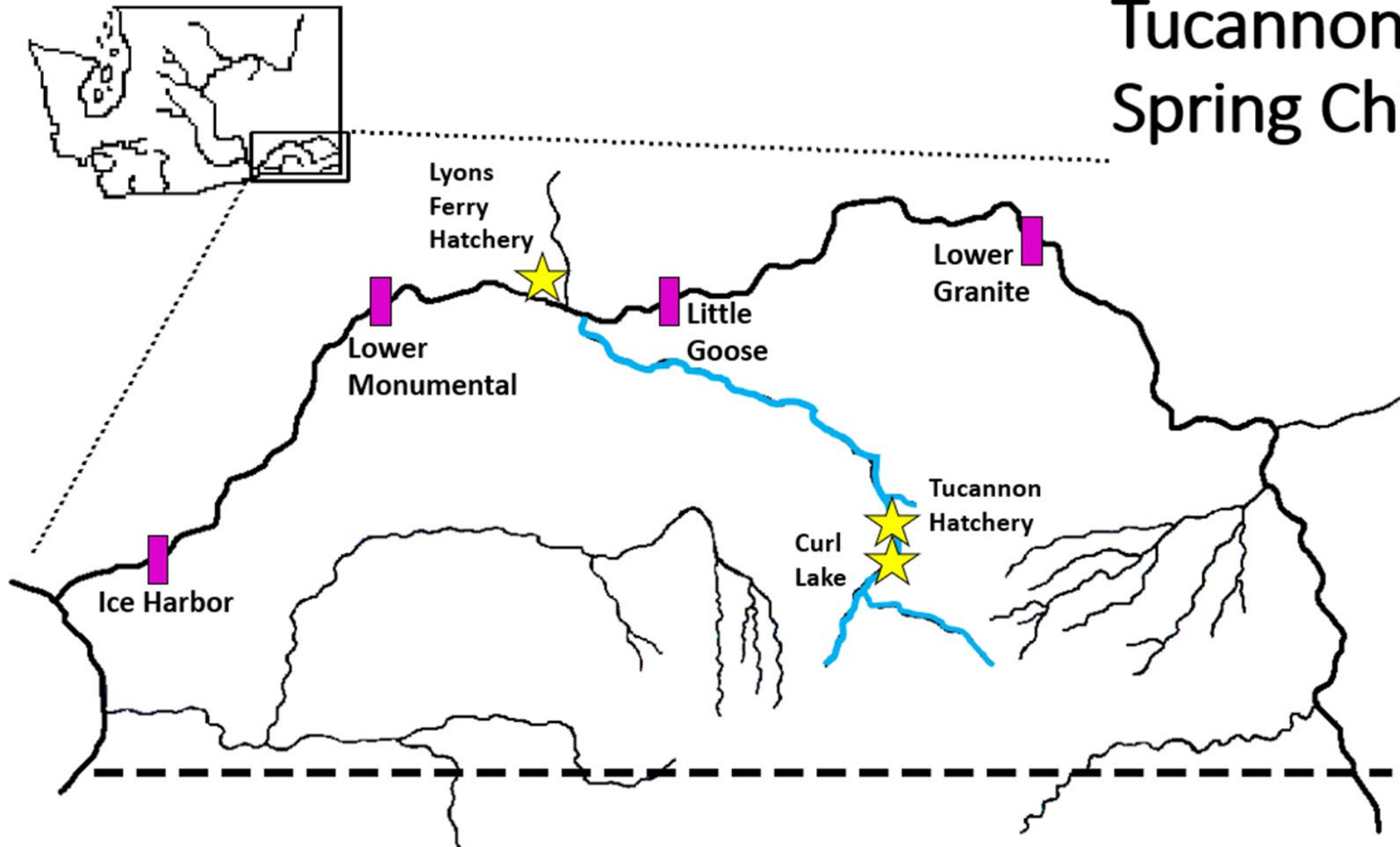


# Tucannon River Spring Chinook: Status, Adult Brood Collection, and Current Management Actions.

Michael Herr, WDFW  
2025 LSRCF Annual Meeting

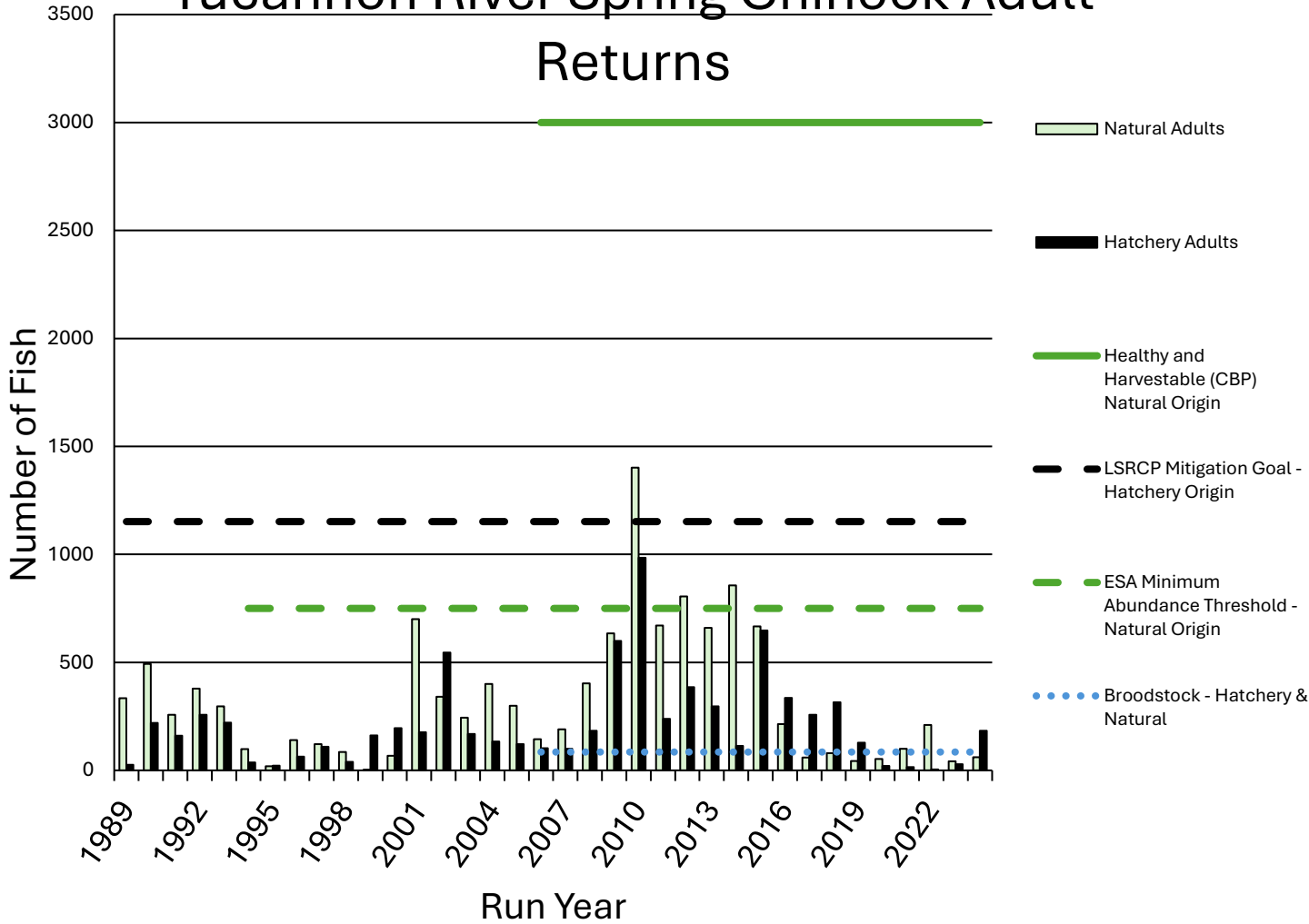


# Tucannon River Spring Chinook





# Tucannon River Spring Chinook Adult Returns



Brood Years - 2000-2013 AVG Survival		
Location	Release Site	SAS
Abv LGR	Imnaha	1.10%
Abv LGR	McCall	0.88%
Abv LGR	Grande Ronde	0.80%
Abv LGR	Dworshak	0.58%
Abv LGR	Sawtooth	0.34%
Abv LGR	Clearwater	0.33%
Blw LGR	Tucannon	0.19%

From LSRCP Annual Report 2020



# Past Adaptive Management:

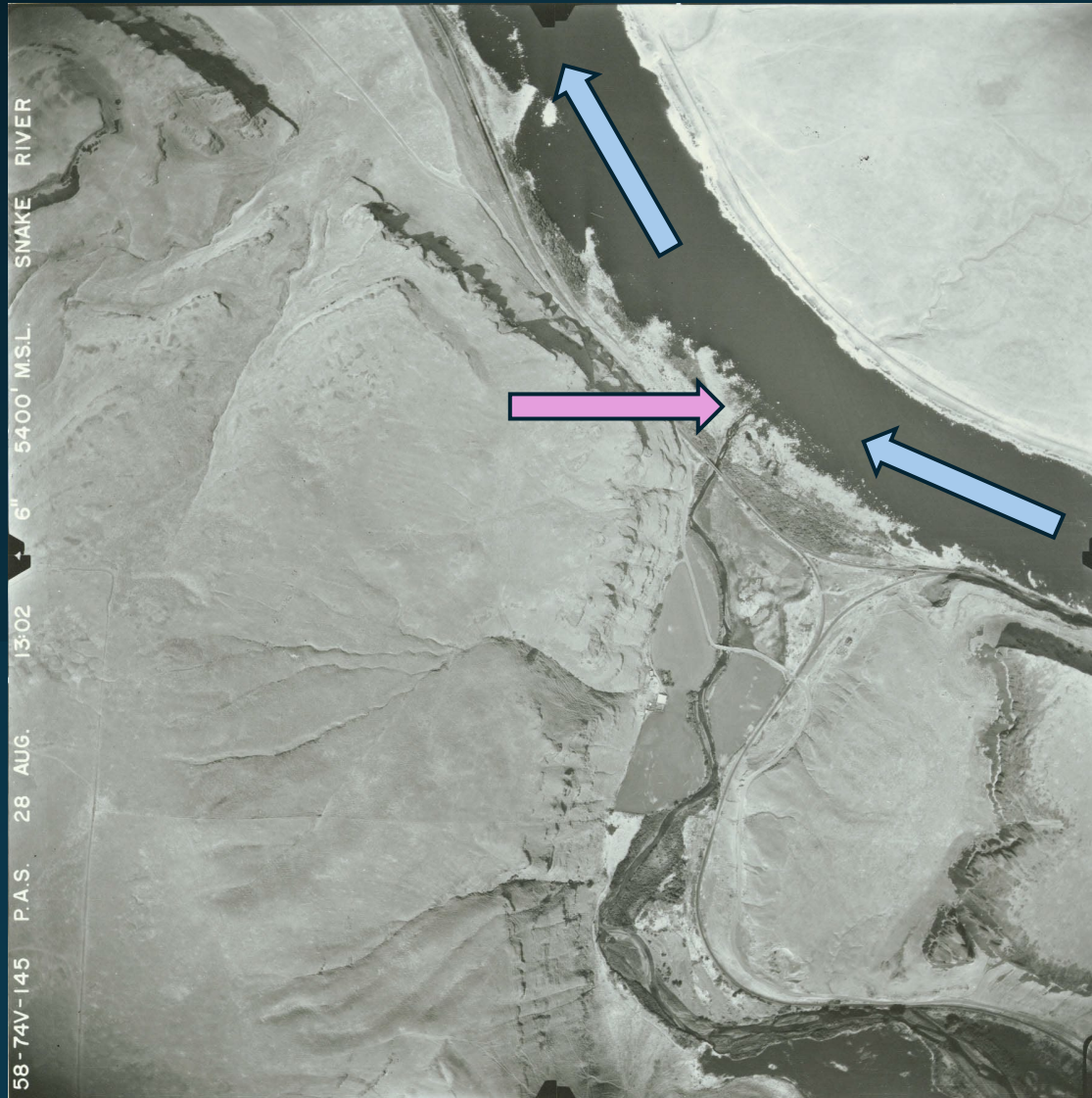
- Poor adult returns in late 90's floods/poor survival
- Observed SARs lower than any other releases in Snake River Basin
- Low SARs for both captive and normal supplementation
- High pre-spawn mortality in adults left to spawn naturally in the river
- Captive brood program attempted from 1997-2002
- Adjusted smolt release goal to reflect realized SARs from releases
- Size at release study, changed release size to 12fpp after study
- Collected all adults at the Tucannon Fish Hatchery weir for out-planting





# Issues facing adult returns: Overshoot

1958



2025







# Issues affecting juvenile survival: predation, hydrosystem



Began capturing walleye in Tucannon smolt trap in 2022

0 captured in the previous 25 years at the same trap location (rkm 3)

2023/24  
WDFW  
Walleye diet  
analysis study



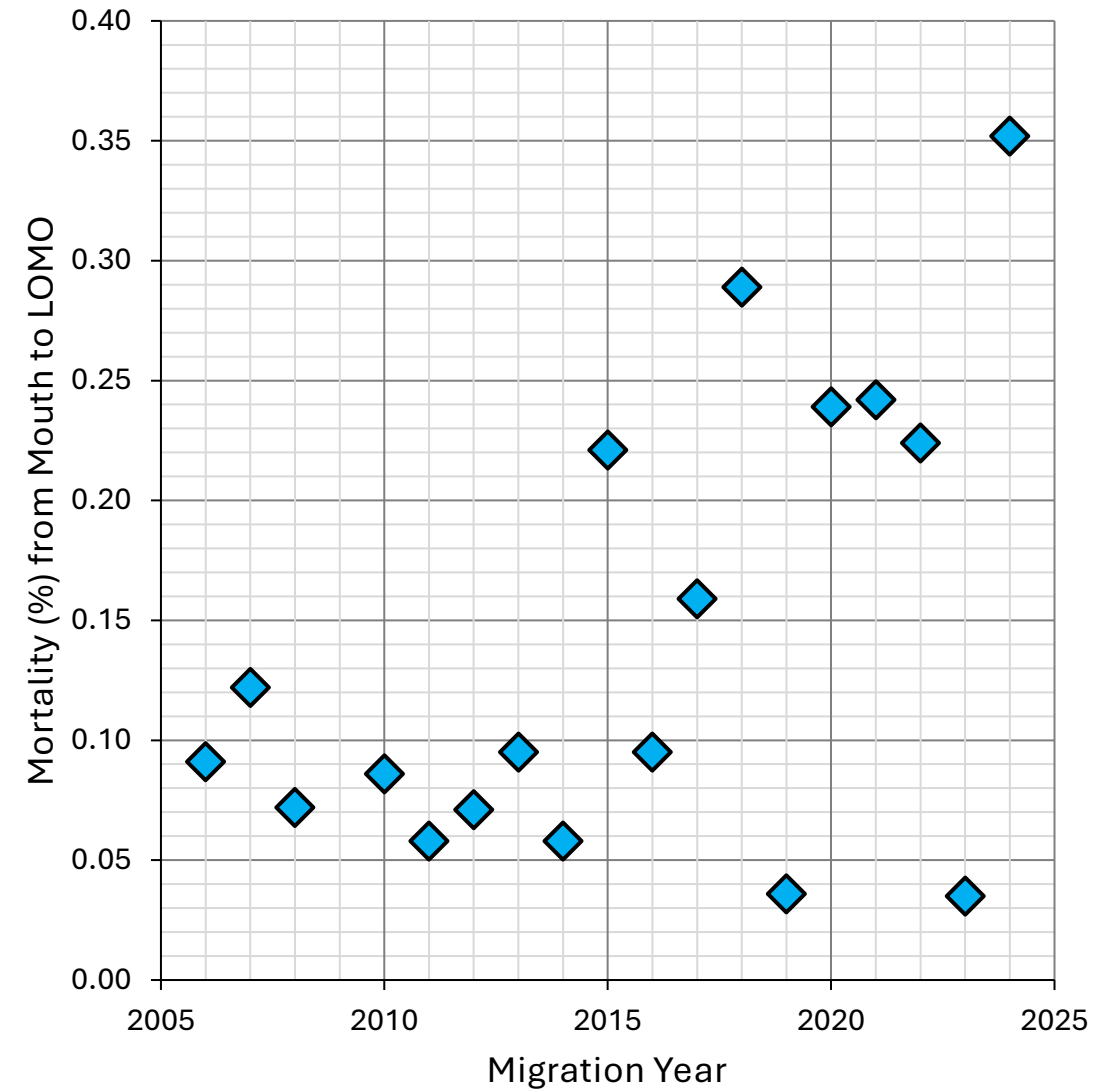
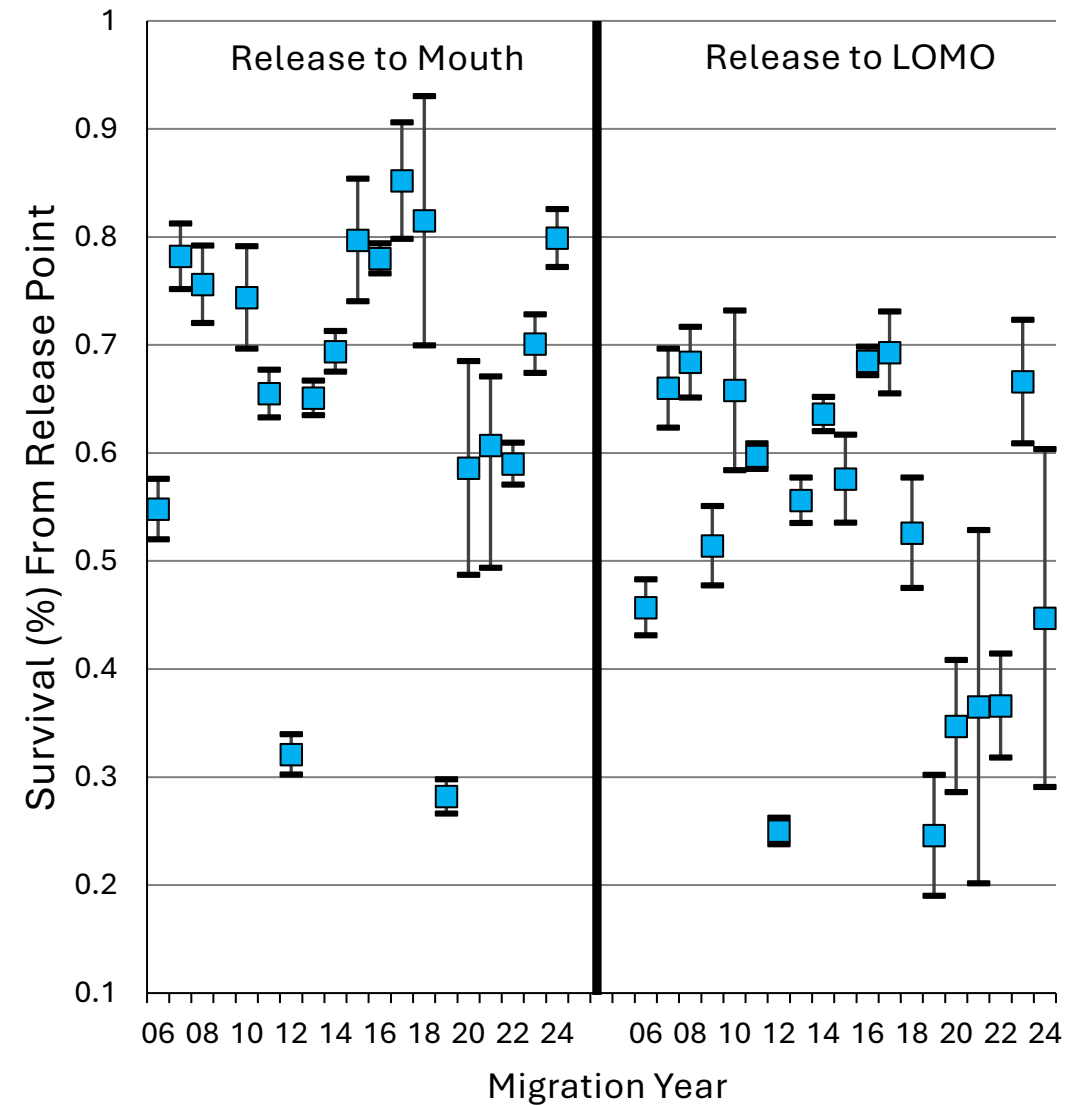
Predation on  
presumed natural  
origin Tucannon  
SPCH



Fork length ~110mm

## Other Predators Contributing





**\*\* Lower Monumental Dam is only 62 miles away from the release point**





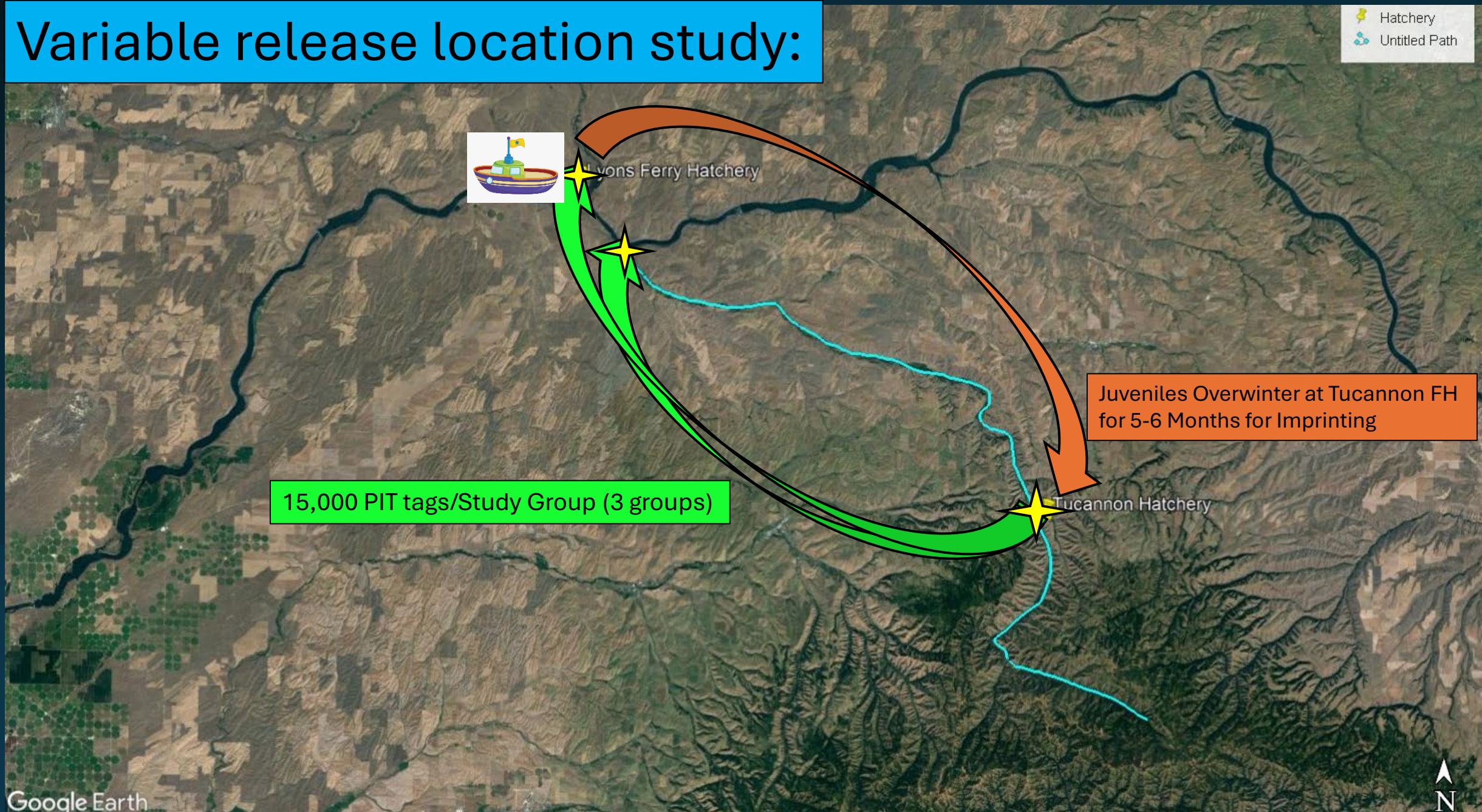
# Current Adaptive Management:

- Variable release location study. Final juvenile releases in 2025, adult returns through RY 2028.
- Out of basin releases at Kalama Falls Fish Hatchery. Proposed action that begin with releases on 24 March 2025. Safety net Offsite release Strategy (SOS)





# Variable release location study:



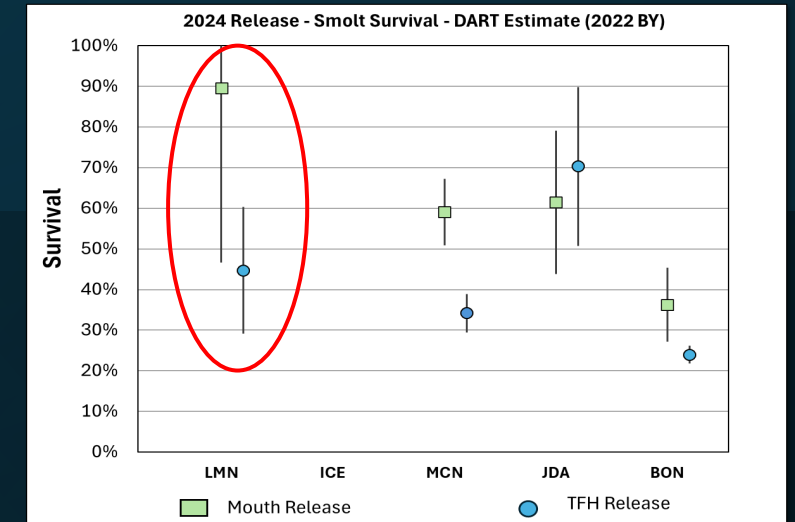
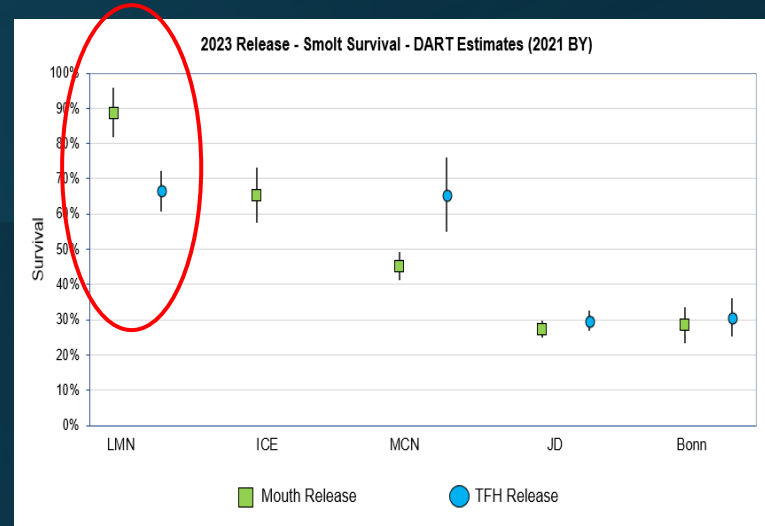
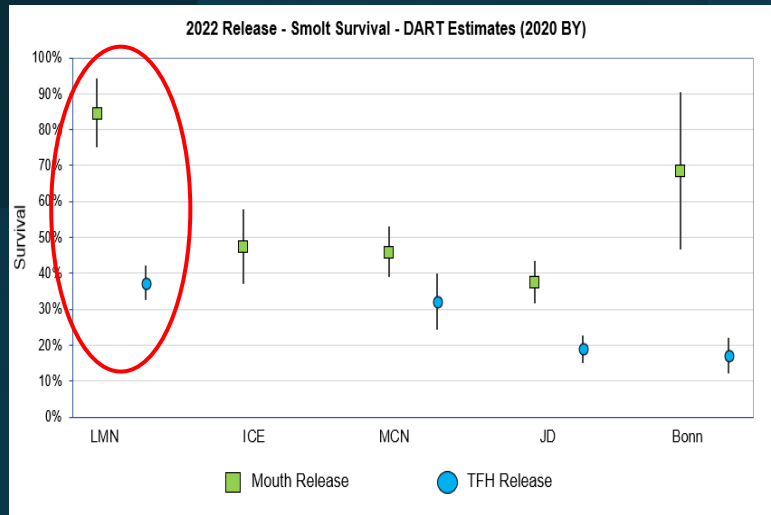




# Variable release location study:

BY	RY	TFH	PITs	Mouth	PITs	Barge	PITs	Total Release
2020	2022	42,406	19,897	19,974	19,667	0	0	62,380
2021	2023	79,465	14,989	20,288	14,864	20,294	14,920	120,047
2022	2024	200,141	14,839	17,005	14,724	18,588	14,631	235,734
2023	2025	48,000*	15,000*	20,000*	15,000*	0	0	68,000*

## Juvenile survival:





## TFH Release (control)

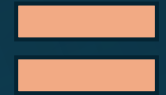
## Mouth Release

## Barge Release

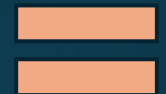
Juvenile Survival



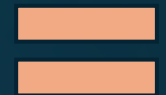
Adult Returns (SAS)



Project area (SAR)



Overshoot



Conversion to TFH



Barge  
release  
group  
ended after  
initial adult  
returns



# Safety net Offsite Strategy (SOS)

BY2023 release (~48k) on 03/24/2025

Legend  
Hatchery  
Untitled Path

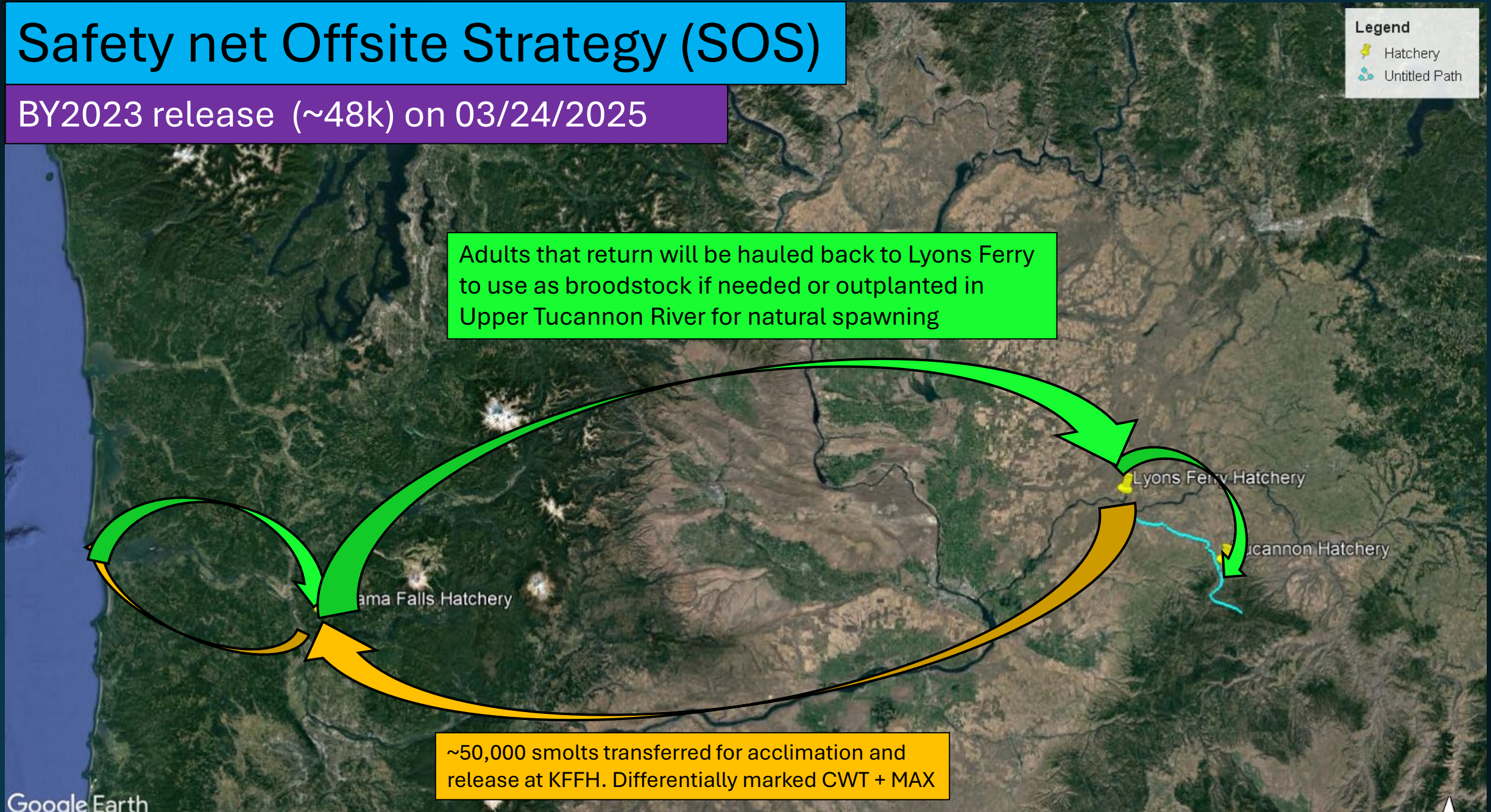
Adults that return will be hauled back to Lyons Ferry to use as broodstock if needed or outplanted in Upper Tucannon River for natural spawning

Lyons Ferry Hatchery

Tucannon Hatchery

Kama Falls Hatchery

~50,000 smolts transferred for acclimation and release at KFFH. Differentially marked CWT + MAX







# Kalama Falls Fish Hatchery Releases

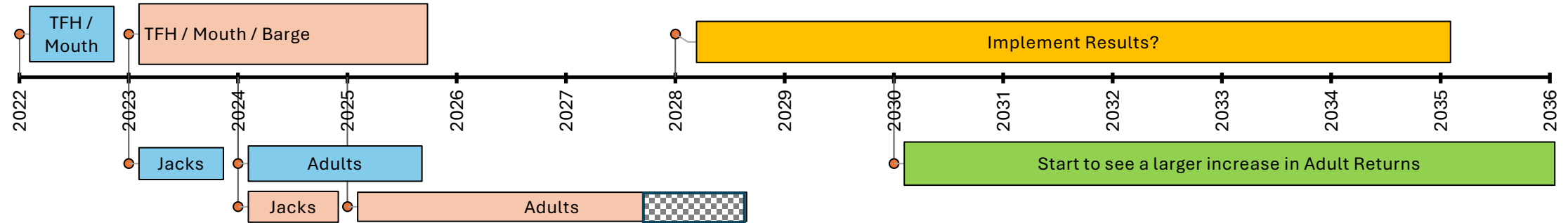
- Predicted SARs and rationale.
- ~48,000 smolts released 3/24/2025 from KFFH.
- Adult returns in 2027 will be trucked to LFH with out-plants in Tucannon River.
- BiOP completed with a Section 7 permit.

Prediction category	SAR Used	Rationale
Pessimistic (P)	0.2%	The current SAR of Tucannon spring Chinook Salmon returning to the Tucannon, and likely the worst-case scenario
Moderate (M)	0.5%	Prior modeling of CWT data from returning lower Columbia River spring Chinook Salmon showed this as moderate
Optimistic (O)	1.0%	Prior modeling of CWT data from returning lower Columbia River spring Chinook Salmon showed this is the upper bound

	Expected Smolt Release Number								
Number of Smolts Released	30,000			50,000			100,000		
Scenario	Pess	Mod	Opt	Pess	Mod	Opt	Pess	Mod	Opt
Assumed SAR	0.2%	0.5%	1.00%	0.2%	0.5%	1.00%	0.2%	0.5%	1.00%
Total Expected Adult Returns to Kalama	60	150	300	100	250	500	200	500	1000
Age 3	15	37	74	25	62	124	49	124	247
Age 4	42	106	212	71	177	353	141	353	706
Age 5	3	7	14	5	12	24	10	24	48
Expected Captured at Kalama Weir	48	120	240	80	200	400	160	400	800

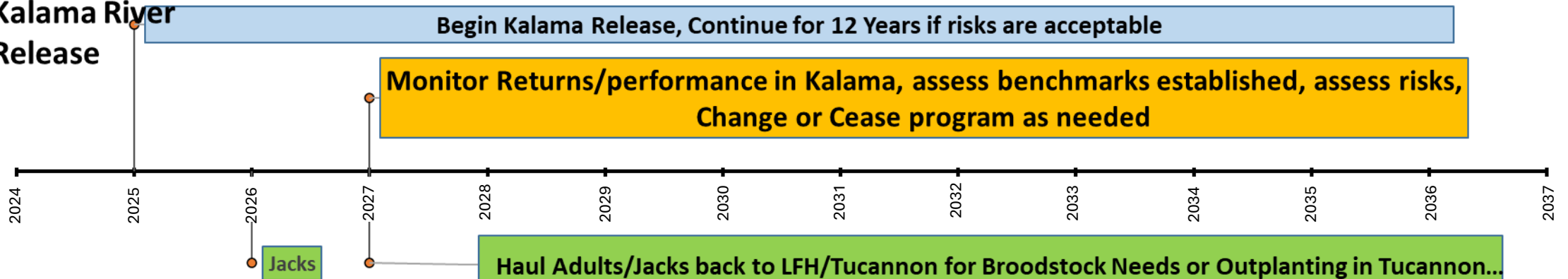


# Timeline for current management:



Variable release location study:

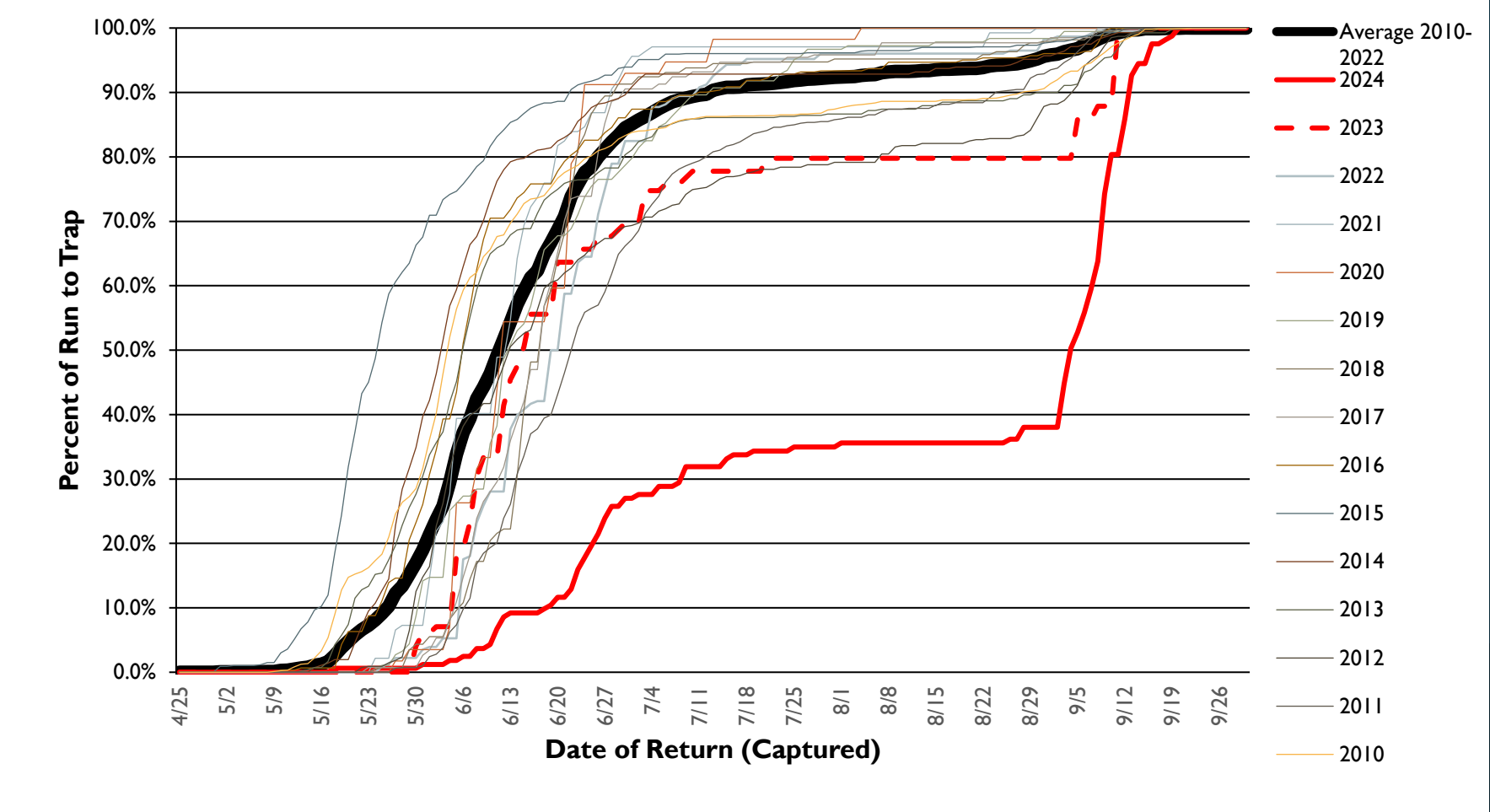
## Kalama River Release







# 2024 Adult Return Broodstock Trapping:



## 2024 Brood Collection at TFH

F		M		J		Totals	
W	H	W	H	W	H	Females	Males
18	17	8	8	44	68	35	128

~35% of estimate escapement





2015



2024







## Planned emergency HPA instream work



- May 12<sup>th</sup>, instream work
- Excavate out in front of trap entrance
- Push far bank in to reroute stream to trap side





- Habitat greatly improved directly below weir
- Extra trap for hatchery outflow, fits in existing bar rack







# WANTED!



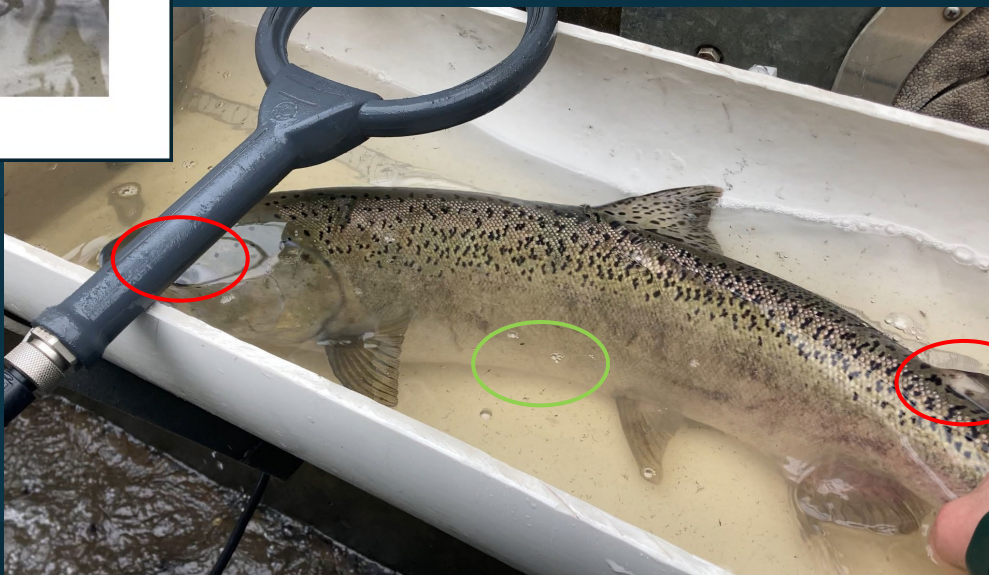
## Do you trap spring Chinook in the Columbia River Basin?

Please be on the lookout for Tucannon River spring Chinook!

- Experimental barge release groups in MY23 and MY24 have impacted homing abilities for these releases.
- Initial jack returns in RY 2024 showed PIT tag returns (n=63) above Bonneville Dam, but only 3 of these PIT tags converted to the Tucannon River.
- Adult returns in the Tucannon River are at critically low levels, any adults over Bonneville Dam are valuable, project staff are willing to travel to return these fish to Lyons Ferry Hatchery.

### Is it a Tucannon River spring Chinook?

- **100% Adipose Intact and CWT present**
- **PIT tagged**
- Ptagis Query will show release location: Tucannon River, Tucannon Fish Hatchery, or Lyons Ferry Hatchery, and are the only releases of spring Chinook from those locations.
- If you encounter one of these adults, please hold and contact one of the project contacts.



### Project contacts:

- Michael Herr  
[michael.herr@dfw.wa.gov](mailto:michael.herr@dfw.wa.gov)  
(509) 382-1004
- Ace Trump  
[ace.trump@dfw.wa.gov](mailto:ace.trump@dfw.wa.gov)  
(509) 646-9201





Sort by Code submitted at LGR:

- 60-100% of PIT tag groups overshot in 2024
- High rate of PIT tags from juvenile releases
- Trap/haul to LFH
- Expect >150 adult PIT tags over Bonneville in 2025







# Curl Lake Acclimation Facility:







# Curl Lake Alternatives:

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"><li>• A) Partial removal/release</li></ul>                                 | <ul style="list-style-type: none"><li>• Narrow the footprint, up to 32 circular tanks aboveground</li></ul>                          | <ul style="list-style-type: none"><li>• Widen channel by 2/3</li></ul>     |
| <ul style="list-style-type: none"><li>• B) Partial removal/release</li></ul>                                 | <ul style="list-style-type: none"><li>• Reduce the size of footprint, longer and narrower lake</li></ul>                             | <ul style="list-style-type: none"><li>• Widen channel by 1/3-2/3</li></ul> |
| <ul style="list-style-type: none"><li>• C) Full removal, alternate acclimation site in upper basin</li></ul> | <ul style="list-style-type: none"><li>• Above ground, temporary acclimation similar to BCA or PLA</li></ul>                          | <ul style="list-style-type: none"><li>• Full Channel</li></ul>             |
| <ul style="list-style-type: none"><li>• D) Full removal, alternative weir location</li></ul>                 | <ul style="list-style-type: none"><li>• Look for a site in lower river for permanent adult weir for adult brood collection</li></ul> | <ul style="list-style-type: none"><li>• Full Channel</li></ul>             |



- Options all have higher DI than existing infrastructure
- Varying cost associated with all options
- Lose recreational opportunity at Curl Lake





Questions?